Contribution of Geographic Education in Growing Students' Character of Environment

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ABSTRACT
This study aims to analyze three things, namely: First, how students concern about the environment; Second, how the role of geography learning in fostering environmental care for students; and Third, how the influence of socio-cultural, psychological and demographic factors on spiritual intelligence on students. This survey research was conducted at the Global Teratai Putih Bekasi High School with a sample of 79. Data collection techniques were carried out through a questionnaire and data analysis was carried out using SPSS software. The results showed that the students' concern for the environment was considered sufficient; geography subjects contribute to the environmental care character of students; the character of students 'environmental care is influenced by factors students' perceptions of the competence of geography teachers in integrating actual environmental problems in geography subject matter, socioeconomic backgrounds and activeness in environmental groups.

Keywords: *Geography Education, Character of Environmental Care*

1. INTRODUCTION

Environmental programs in the form of ecological disturbance, destruction of natural flora and fauna, air, water and soil pollution, soil and rock mass instability, landscape degradation, desertification and global warming [1] are mostly caused by human behavior [2], which are anthropogenic [3-5], maladaptive human behavior [6]. Therefore, to overcome these problems must be done holistically [7], not only through technical advances but changing attitudes and behaviors at the individual level [8-9] namely changing this anthropocentric view to an ecocentric view [10-11], humans have freed themselves from natural law and placed themselves as rulers over the natural world of [12] and people's behavior must contribute positively to the environment, one of which is to adopt pre environmental behavior patterns [13].

Education plays a very important mission which is to change people's behavior and positive perspective on the environment [4,14]. Educational and social factors are identified to significantly influence environmental care [15]. Education provides skills that prepare a person physically, mentally and socially confident to solve many problems in society [16] including environmental problems.

The attitude of caring for the environment is one of the values developed in character education. Character education has been carried out in many countries around the world such as the American Character Education Programs in the United States [17], Moral and Character Education Improvement Programs in Taiwan [18]. In Sweden, education character becomes part of the curriculum and integrated in classroom learning [19] and in Turkey, character education is carried out through life sciences, social studies curriculum and hidden curriculum [20]. Whereas in Indonesia, character education has been carried out intensively since the enactment of the Competency Based Curriculum in 2004, then strengthened by Presidential Regulation No. 87 of 2017 which aims to further strengthen the role of character education in Indonesia.

Character education is defined as a deliberate attempt to influence student behavior through repeated adjustments [21]; a planned and systemic approach to educating students to become good citizens with self-esteem, responsibility and honesty [22] and is a specific curriculum that develops students' understanding of the qualities and characteristics of good characters [23]. Character education is described as any deliberate approach taken by teachers together with parents and community members to help children and adolescents

have attention, principles and be responsible [24]. Character education aims to improve the quality of education and output in schools that lead to achieving the formation of noble characters and noble character as a whole, integrated, and balanced in accordance with applicable competency standards [25].

The character of caring for the environment is a character that must be implemented for schools at all levels of education. All school members must have a caring attitude towards the environment by increasing the quality of the environment, increasing school community awareness about the importance of caring for the environment and having initiatives to prevent environmental damage. Environmental care character education is instilled early on in students so they can manage wisely the natural resources that are around, and to foster a sense of responsibility towards the interests of future generations. When the character of caring for the environment has grown into a strong mental state, it will underlie a person's behavior in daily life.

Implementation of character education according to [26] is carried out through (a) learning activities: using an active learning approach; (b) the development of school culture and learning centre activities, which are carried out through self-development activities including routine activities, spontaneous activities, modelling, conditioning, co-curricular and extracurricular activities as well as daily activities at home and in the community.

Character education must be delivered to students, but not be a separate subject. Integration into school subjects, self-development, and culture is an implementation of character education including environmental care characters. Therefore all subjects must carry out character education in an integrated manner in each learning implementation including geography subjects. Geography as a scientific discipline together with other disciplines plays an important role in environmental education, which helps people gain awareness of the earth and its natural resources and values. Geography studies the surface of the earth, including the lithosphere, hydrosphere, atmosphere, biosphere, human geographical environment, and internal relations [27]. In Indonesia, geography is included in the Social Sciences (IPS) family and is a continuation of social studies at elementary and junior high schools. Thus, geography subjects will continue to develop the knowledge, attitudes, and skills of social studies subjects and develop geography as an independent science discipline for terrestrial sciences at the tertiary level.

Geography competencies are formulated by referring to the demands of the XXI century, namely having critical thinking skills and problem solving related to changes in space on the Earth's surface, damage and efforts to preserve the environment, the distribution and utilization of natural resources, and the various impacts of changes due to geosphere processes both in the local context, national and global. Therefore it is interesting to conduct research related to the following research questions: First, the extent of the contribution of learning geography in growing students' eco-literacy and Second, how the influence of socio-economic and cultural factors and demographics on eco-literacy on students

2. METHOD

This survey research was conducted at Teratai Putih Global High School Bekasi. Survey research is a means to gather information about the characteristics, actions, or opinions of a large group of people [28], used to assess needs, evaluate requests, and examine impacts [29], used to answer questions that have been asked, to solve problems that have been raised or observed [29], used to quantitatively describe specific aspects of a particular population; the data needed for survey research is collected from people and is therefore subjective, using certain parts of the population whose results can then be generalized back to the population [30]. The population in this study were all Social Sciences high school students of class X, XI and XII of SMAN 2 North Cikarang with a total of 79 people. Samples were taken using the Slovin formula n = N / (Nd2 + 1) (n = number of samples; N = number of population; d = precision or percent of inaccuracy due to tolerable sampling errors = 0.05), so that 236 samples were obtained. Sampling is done randomly which means that every element in the population has the same opportunity to be selected as a sampling [29, 31-32].

The research variables studied are environmental care among students and the factors that influence it. The instrument for measuring environmental care consisted of 11 questions using behavioral scales with alternative answers SL (always), (SR (often), JR (rare), Ever (P), and TP (never); to measure the role of geography learning towards environmental care character of the students consisted of 4 questions using attitude scale with the answer choices SS (strongly agree); S (agree); A (abstain); TS (disagree) and STS (strongly disagree). the factors contributing to the level of concern for students in the environment consist of 6 questions.

Data analysis was performed by carrying out the following stages: validity test with the corrected item-total correlation technique; Reliability test; T Test Independent Test and Structural Equation Modeling (SEM). SEM is a statistical approach that is widely used to test and estimate causal relationships using a combination of quantitative data and qualitative causal reasoning and can construct latent variables.

3. RESULTS AND DISCUSSION

3.1. Description of Respondents

Descriptions of respondents in the study included seven variables, namely gender, student participation in organizations or communities related to the environment, respondents 'perspectives on geography subjects, parents' educational background, parents 'occupational backgrounds and parents' income backgrounds. The characteristics of the respondents described are based on the assumption that they are factors that contribute to students' level of care for the environment.

Based on data analysis, obtained the following characteristics of respondents: First, the sex consists of male sex 43 people (54.4%) and women 36 people (45.6%); Second, the participation of students in organizations or communities related to the environment consists of participating 14 people (17.7%) and not participating 65 people (82.3%); Third, the respondent's perspective on the subject of geography is an element of the subjectivity of the respondent to the geography teacher in teaching which is manifested in the form of very like 45 people (57%), like 23 people (29.1%), abstaining 11 people (13.9%) ; Fourth, parents' educational background consists of 24 (30.4%) high school education, 39 people with 49 degrees (49.4%) and 16 post- graduate students (20.3%); Fifth, the work background of these parents is simplified to work related to the environment 16 people (20.3%) and work that is not related to the environment 63 people (79.7%); and Sixth, the background of the income of these parents is grouped into income less than 2.5 per month as many as 7 people (8.9%), income 2.5-3.5 million per month as many as 22 people (27.8%), income of 3.51-4.5 million per month as many as 43 people (54.4%), and income of 4.51-5.5 million per month as many as 7 people (8.9%).

3.2. Characters Care about the Environment of Students

Currently Based on the outputs of spss, it can be seen that the level of concern for students towards the environment gets a score of 37.66 (range 11-55). This means that they are categorized as moderate or good enough (11-25 are categorized as low, 26-40 are categorized as moderate or good enough, and 41-55 are categorized as good or high). In detail the average scores of each instrument (range of grades 1-5) are as follows: The habit of maintaining cleanliness at home (3.85); treatment of water during bathing (3.66); behavior of turning off lights when leaving a room to eat (1,90); treatment of waste (4.04); work-related decisions in relation to the environment (2,32); response to others in relation to the environment (2,29); turn off the lights that are not used (3.99); reuse of goods that have been used (4.04); habits of buying environmentally friendly products (4.01); response to changes in relation to the environment (4,03); and carry shopping bags when shopping (4.05). Based on these data it is seen that in general the habit of turning off the lights when leaving the room is very low, this is indicated by the low score of the question that is only 1.90. In addition, basically people will care about the environment if the whole community in the area cares. This can be seen from the low score obtained from the question that people will care about the environment if others care that is 2.29.

The results of this study can be confirmed by several previous studies, including stating that environmental care behavior is influenced by many factors including environmental knowledge that will increase attitudes and this will result in an increase in environmental behavior [33]. However, based on the theory of planned behavior, this model often does not function in real situations [34]. Theory of planned behavior [35] which states that when faced with the need to decide on an action, people consider the necessary resources and potential obstacles. These considerations or beliefs result in the formation of attitudes towards behavior. Attitudes toward certain behaviors, subjective norms, and perceptions of behavioral control do not have a direct influence on behavior; but in turn the intention is to determine the actual behavior [36]. In addition, social influencing factors, information resources, environmental management facilities, knowledge, beliefs, attitudes and personal responsibility influence environmental behavior [3, 34, 37]. Environmental awareness, attitudes and behavior can vary based on gender, age, education, income, family, residence, country, political tendencies, environmental knowledge / awareness, school and others [38-40], knowledge, attitudes, personal responsibility, trustworthiness, social influence, information resources, and environmental management facilities) contributed 44% to environmental care behavior [36].

3.3. The Role of Geography Learning in Fostering Environmental Care Characters in Students

The role of geography learning in fostering environmental care characters in students is seen from the aspect of the role of geography learning in increasing students' knowledge about environmental issues; the role of geography learning in increasing students' knowledge about environmental conservation; the role of geography learning in promoting environmentally friendly behavior; and the role of geography learning in inspiring students to care for the environment.

Based on the output of spss, it can be seen that in general aspects of the role of geography learning in fostering environmental care characters are categorized

high with a score of 15.90 (range of scores 4-20). It can be understood that geography can play a role in environmental education. This is because environmental education is carried out in an integrated manner with all subjects taught in school or conducted in an interdisciplinary manner. Environmental education in schools aims to form students having environmental knowledge which then gives birth to environmental care behaviors. But in practice achieving these goals is very difficult to realize, this is because there are many obstacles in the field such as teacher quality, overall school readiness, parental support including readiness of facilities and infrastructure.

3.4. Factors that Contribute to the Character of Caring Students Towards The Environment

3.4.1. Gender

Sex is a factor that is often associated with environmental stewardship in various studies even though the results vary. Based on the analysis of the output spss data, it can be seen that the average score of environmental concern between men and women there are differences, namely men by 37.8372 and women by 37.4444. However, statistically it was considered insignificant. same). Thus, gender factors do not significantly influence the level of concern for students to the environment. For more details can be seen in the following table:

Table 1. Independent Samples Test

Output SPSS, July 2019

Independent Samples Test

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Character cares about the environment	Male	43	37.8372	3.05451	.46581
	Female	36	37.4444	2.81267	.46878

The results of this study are relevant to the research that has been conducted which is to minimize the effect of gender on environmental awareness by stating that no definitive conclusions can be drawn about their effects on environmental care [41-42]. Gender does not affect environmental care and women "do not care more about the environment than men [43]. Other studies show that men are more active, more knowledgeable, and more concerned about the environment than women [41, 44-45], women are more concerned about the environment than men [39, 46-48] and gender does not affect environmental care [43].

3.4.2. The Participation of Environmental Organizations

The participation of students in environmental activities or organizations is an important thing in fostering environmental awareness. Environmental organizations can act as a source of environmental information for students. Environmental information can be in the form of data, information, or other information relating to environmental events, environmental protection and management. Environmental information forms environmental knowledge that is very necessary to foster attitudes and care for the environment. Environmental knowledge is the basis in understanding the impact of human behavior on the environment, as well as in forming attitudes and changing behavior for the purpose of protecting the environment [33, 49-50].

Based on the analysis of output spss shows that students care for the environment there is a difference between students who are active in environmental organizations and students who are not active. For students who are active in environmental organizations get a score of 37.8571 while the environmental awareness score of students who are not active in environmental organizations get a smaller score of 37, 6154. However, statistically it turns out to be considered insignificant, this is indicated by the value of probability (significance) with an equal variance assumed (assumed both variants are equal) is 0.782 greater than 0.05 then both variants are the same (variants of groups of students who are active in environmental organizations and those who are not the same). Thus, the activeness factor in pecnta environmental organizations does not significantly influence the level of concern for students of the environment. For more details can be seen in the following table:

Table 2. Output SPSS, July 2019

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Character cares about the environment	participate in	14	37.8571	2.76954	.74019
	not participating	65	37.6154	2.98796	.37061

Table 3. Output SPSS, July 2019

Gender			Character cares about the environment	
			Equal variances not assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F		.659	
	Sig.		.419	
	t		.278	.292
	df		77	20.079
t-test for Equality of Means	Sig. (2-tailed)		.782	.773
	Mean Difference		.24176	.24176
	Std. Error Difference		.86984	.82779
	95% Confidence Interval of the Difference	Lower	-1.49032	-1.48454
		Upper	1.97384	1.96806

3.4.3. Students' Perceptions of Geography Teachers

Perception is essentially a cognitive process experienced by everyone in understanding about their environment, both through vision, hearing, appreciation, feeling and smell, basically understanding perception is not a true recording of the situation at hand, but rather an interpretation that is unique to the situation [51]. Perception is an integrated activity, so all that exists in individuals such as feelings, experiences, thinking ability, frame of reference and other aspects that exist in the individual community will play a role in these perceptions [52].

Based on the analysis of the output SPSS shows that students perceptions of geography teachers can be categorized as good or even very good (score 4.29 out of 5). This becomes an important factor that influences the level of concern for the environment. A good perception will give birth to a willingness to follow what is suggested by the subject teacher so that it can be an inspiration whose activities on the environment. This can be seen from the ANOVA results which state that students' perceptions of geography teachers influence the level of environmental concern among students. This is indicated by the probability number (significance) with the equal variance assumed (assumed both variants are equal) is 0.001 smaller than 0.05. More details can be seen in the following table.

Table 4. Anova (Character cares about the environment)

Character cares about the environment

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	110.578	2	55.289	7.488	.001
Within Groups	561.194	76	7.384		
Total	671.772	78			

3.4.4. Parental Education Factors

Education plays an important role in the development of one's knowledge. Education is a process of a person in exploring one's potential and talents, increasing intelligence, skills, enhancing character, strengthening personality, enhancing religious spiritual strength and enhancing the spirit of togetherness in order to be able to build oneself and together. The level of education of parents is the level of education according to the level of education that has been taken, through formal education in tiered schools from elementary, junior high, high school, undergraduate and postgraduate.

Based on the analysis of spss output data it is known that the Sig value is 0.355 and certainly greater than 0.05, this shows that the students 'concern for the environment based on their parents' level of education is not significantly different. The following table shows the analysis of the following ANSSP test output SPSS data.

Table 5. Character cares about the environment

Character cares about the environment

	Sum of Squares	*df*	*Mean Square*	*F*	*Sig.*
Between Groups	18.070	2	9.035	1.050	.355
Within Groups	653.702	76	8.601		
Total	671.772	78			

The results of this study confirm that the educational process is not only in schools but also occurs in the home environment. If the level of education of their parents is adequate, the process of transfer of knowledge, insights, attitudes including awareness of the environment is also present. The family will be able to improve the quality and learning outcomes of a child, which of course will be fulfilled by highly educated

parents. Parents who have a high level of education will be better able to guide, educate their children in the direction that is better as desired, because these parents have provisions obtained from formal education on an ongoing basis and they also have experienced or felt the problems or obstacles that are faced in learning, so that makes parents more able to distinguish what and how to do to their children. This is in line with the results of previous studies which state that father's education has a positive influence on students' environmental awareness and attitudes [53]. Educational factors are identified to significantly influence environmental care [15] and there is a positive relationship between educational attainment and environmental awareness [41, 54].

3.4.5. Parents' Job

Work is an activity that must be done by people to fulfil their needs. The work that parents do will also determine how much income they can get, the type of work consists of formal and side jobs. For the relevance of this study, the work of parents is grouped into two categories namely work related to the environment and work that is not related to the environment. Based on the results of the SPSS analysis showed that the average score of environmental care of respondents with work background of parents relating to the environment amounted to 36,875 while respondents with work background of parents who were not related to the environment amounted to 37,857. This means that in absolute terms the level of concern of respondents with their parents' occupational background with regard to the environment is slightly higher than respondents with their father's occupational background who are not related to the environment. However, if analysed statistically it shows that the probability value (significance) with equal variance assumed (assumed both variants are equal) is 0.234 greater than 0.05. This means statistically that the characters care about the environment of students based on their parents' occupational backgrounds do not show any significant differences. For more details can be seen in Tables 6 and 7.

The above description shows that the level of concern for students of the environment is not influenced by the type of work their parents. It can be understood that the relationship between parents 'work with the environment does not necessarily mean that parents apply all of their work activities in the office to various activities at home and vice versa if the parents' work is not related to the environment.

Table 6. Group Statistic Outpus SPSS, July 2019

Group Statistic

	Parents' job	N	Mean	Std. Deviation	Std. Error Mean
Character cares about the environment	work related to the environment	16	36.8750	3.00832	.75208
	work that is not related to the environment	63	37.8571	2.90637	.36617

Table 7. Independent Samples Test, Output SPSS, July 2019

Independent Samples Test				
			Character cares about the environment	
			Equal variances assumed	*Equal variances not assumed*
Levene's Test for Equality of Variances	F		.014	
	Sig.		.906	
	t		-1.199	-1.174
	df		77	22.646
t-test for Equality of Means	Sig. (2-tailed)		.234	.253
	Mean Difference		-.98214	-.98214
	Std. Error Difference		.81928	.83648
	95% Confidence Interval of the Difference	Lower	-2.61354	-2.71404
		Upper	.64926	.74975

3.4.6. Parental Income

Income in general is often related to the amount of money a person receives as a result of something done,

done or invested. The income is then used or spent to meet various needs in life for a certain period of time. The greater the income, the more needs that can be met, including meeting the educational needs of family members. If the educational needs are met, then the quality of a person theoretically gets better, including his awareness of environmental sustainability. The relationship between parental income and the character of caring students towards the environment in this study can be seen from the following table:

Table 8. Character cares about the environment

Character cares about the environment

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	102.558	3	34.186	4.504	.006
Within Groups	569.214	75	7.590		
Total	671.772	78			

Based on the above spss output, the Sig value of 0.006 is smaller than 0.05, so it can be concluded that the character of caring for students 'environment based on parents' income is significantly different. The results of this study are relevant to other studies which state that there is an influence of family income on environmental care [55]. Financial support may reflect the financial ability of individuals to pay contributions and fees to environmental organizations more than their concern for the environment [56]. Family income influences support for environmental problems and that high-income families provide more support than low-income families.

4. CONCLUSION

The environmental care character of students needs attention from all subjects. Based on the analysis of the data in this study, it was revealed that geography subjects have contributed to fostering students' environmental care characters. Nevertheless the character of caring for the environment is influenced by various factors, namely the factors of parents 'income and students' perceptions of geography teachers. Parents' income is assumed to influence the culture built by the family at home. People who have adequate income correlate with the level of education and habits that are quite friendly to the environment. Vice versa, people who have inadequate income almost do not have room to think about things beyond their basic needs. Nevertheless, this argument still needs to be proven through deeper research.

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